

REMARKS

Claims 1 to 73 are pending. Claims 31 to 73 are withdrawn from consideration. Claim 27 is currently amended.

Support for the amendment to claim 27 may be found, for example, in the specification on page 5, lines 17-21 and in withdrawn claim 69.

§ 102 Rejections

Claims 1-14 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Izzi et al. (U.S. 2004/0001931).

The Patent office asserts that Izzi et al. disclose heat activatable adhesives that are non-tacky until a certain activation temperature is reached, and that once the activation temperature has been reached, the adhesive becomes tacky and bondable.

The Patent Office further asserts that an acrylic adhesive composition was prepared and evaluated for accelerated flow, wherein the acrylic copolymer composition of 48 pbw 2-ethylhexyl acrylate, 50 pbw behenyl acrylate, and 2 pbw acrylic acid was prepared by solution polymerization at 40% solids in ethyl acetate. The Patent Office asserts that the acrylic adhesive composition is a representative of the C-22 alkyl acrylate and is a specific specie named in instant claim 6.

With regard to the limitations of claim 12, the Patent Office asserts that the "less than about 1%" limitation reads on 0%, as well.

With regard to claims 9 and 10 the Patent Office asserts that the prior art teaches the identical chemical structure, and that the claimed properties and characteristics are necessarily present.

With regard to claim 7, the Patent Office notes that term "about" permits some tolerance, and therefore, encompasses values on either side of the claimed value or number.

Applicants note that U.S. 2004/0011931 as cited in the present Office Action concerns a portable containment unit and lists Nicholas A. Restifo as the inventor. Applicants presume that the correct citation in the rejection should be U.S. Publ. Pat. Appln. 2004/0001931, which

concerns a linerless printable adhesive tape and names Izzi et al. as inventors, and have responded accordingly.

Without agreeing to the Patent Office's characterization of Izzi et al., or admitting that the rejection is even proper, Applicants submit that instant claim 1 requires that the polymer is essentially free of acidic groups. The term "essentially free of acidic groups" is defined in the specification on page 6, lines 29-32 as containing less than 0.1 percent by weight of acidic groups. However, the recited composition of Izzi et al. contains 2 pbw (i.e., more than 0.1 percent by weight) acrylic acid. Acrylic acid contains a -CO₂H group and is clearly an acidic monomer (e.g., see the specification on page 6, line 31). For at least this reason, it is submitted that the Patent Office has not shown that Izzi et al. properly anticipates instant claim 1 as alleged.

The rejection of claim 1 under 35 USC § 102 as being unpatentable over Izzi et al. has been overcome and should be withdrawn. Claims 2-14 each add additional features to claim 1, which is patentable for at least the reason given above. Hence, claims 2-14 are likewise patentable.

In summary, the rejection of claims 1-14 under 35 USC § 102(e) as being unpatentable over Izzi et al. has been overcome and should be withdrawn.

§ 102/103 Rejections

Claims 1-5, 7-19, 21-30 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over by Everaerts et al. (U.S. 5,648,425).

The Patent Office asserts that Everaerts et al. '425 disclose pressure sensitive adhesive comprising a) from about 10 to about 50 percent by weight of at least one higher alkyl acrylate having an alkyl group from 12 to 26 carbon atoms; b) from about 50 to about 90 percent by weight of at least one lower alkyl acrylate having an alkyl group from 4 to 12 atoms wherein said upper and lower alkyl acrylates cannot simultaneously have alkyl chains of 12 carbon atoms; c) at least one polar monomer copolymerizable with said higher and lower alkyl acrylate; d) sufficient crosslinker to impart enough cohesive strength to the adhesive in order to prevent substantial adhesive transfer. The Patent Office further asserts that the polar monomer of the pressure-

sensitive adhesive of the present invention can comprise either a strongly polar and/or a moderately polar monomer and can comprise up to about 5% by weight polar monomer if it is a strong polar monomer and up to about 30% by weight polar monomer if it is a moderately polar monomer. The Patent Office further asserts that, among polar monomers, non-acidic polar monomers are named in Everaerts et al. '425

The Patent Office further asserts that the amount of a crosslinker varies from 0.05 - 1 % , and that the instant preamble calls for heat-activatable adhesive, while Everaerts et al. '425 concentrate on pressure sensitive properties.

The Patent Office argues that it is the base presumption that the properties governing the claimed compositions, if not taught, may be very well met by the compositions of Everaerts et al. '425, since the composition of Everaerts et al. '425 is essentially the same and made in essentially the same manner as, Applicants' composition, and therefore the properties that are not taught will naturally and inherently flow in the teaching of the prior art reference. The Patent Office argues that the onus to show that this, in fact, is not the case is shifted to Applicants.

Without agreeing to the Patent Office's characterization of Everaerts et al. '425, or admitting that the rejection is even proper, Applicants submit that as used in the instant claims the term "activation temperature" refers to the minimum temperature below which a material is essentially non-tacky, yet becomes aggressively tacky if increased by two degrees Celsius (e.g., see the instant specification on page 4, lines 19-20). In instant claims 1 and 15, the activation temperature is at least about 40 degrees Celsius.

In order to establish inherency "the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)" (see MPEP 2112, section IV, emphasis added)

Further, MPEP 2112.01, section I states a "*prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed

product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. See also *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)." [emphasis added]

In view of the above, attention is drawn to Comparative Example C1 (e.g., see the specification on page 13 in Table 1) in which a composition falling within the scope of the reported adhesives in Everaerts et al. '425 was found to be tacky prior to thermal activation. Hence, at least Comparative Example C1 does not necessarily have all the properties required in instant claims 1 and 15.

For at least this reason, it is submitted that Everaerts et al. '425 does not properly anticipate claim 1 or claim 15, or their dependent claims 2-5, 7-14, 16-19 and 21-30 which each add additional features.

With regard to obviousness, it is submitted that one would not be properly motivated by the teaching of Everaerts et al. '425 to make a material that is non-tacky. For example, the very essence of the Everaerts et al. '425 patent is the formulation of adhesives that are pressure sensitive under normal conditions; see, for example, the working examples of pressure sensitive adhesives in Everaerts et al. '425 in col. 8, line 51 through column 12, line 13. In contrast, in instant claims 1 and 15, the heat-activatable adhesive has an activation temperature that is at least about 40 degrees Celsius (i.e., the heat-activatable adhesive is essentially tack free below about 40 degrees Celsius). However, Everaerts et al. '425 states in col. 4, lines 33-41:

"It is theorized that the long side chains of these acrylate and methacrylate esters increase the entanglement molecular weight of the polymer and facilitate the melt processing of the polymer. At the concentrations used in this invention, it is believed that the side chains do not crystallize substantially at room temperature and that the resulting polymers are amorphous. If there was substantial crystallization, the modulus of the material would increase causing a loss of pressure sensitive adhesive tack."

Hence, it is submitted that, in the context of making a pressure sensitive adhesive, Everaerts et al. '425 in essence teaches away from formulations that would have reduced tack, for example, as in the invention of claims 1 and 15, which is essentially tack-free at temperatures below about 40 degrees Celsius.

For at least these reasons, it is submitted that Everaerts et al. '425 would not properly motivate one of ordinary skill in the art to prepare a composition falling within the scope of

either claim 1 or claim 15, or their dependent claims 2-5, 7-14, 16-19 and 21-30 which each add additional features.

In summary, 1-5, 7-19, 21-30 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over by Everaerts et al. '425 has been overcome and should be withdrawn.

§ 103 Rejections

Claims, 7 and 20, are, rejected under 35 U.S.C. § 103(a) as being unpatentable over Everaerts et al. '425 in view of Husemann et al. (US 2003/0113533).

The Patent Office admits that Everaerts et al. '425 do not specify behenyl acrylate as a comonomer, but asserts that Everaerts et al. '425 do generically teach the monomers 12 to 26 carbon atoms, thus suggesting to those skilled in the art to employ any species from the disclosed genus. The Patent Office asserts that Husemann et al. disclose heat activatable adhesive having an activation temperature of at least +30 °C, comprising a polymer that is composed of the following monomers: a1) from 70 to 100% by weight of acrylates and/or methacrylates and/or their free acids with the following formula



where R_1 is H and/or CH_3 and R_2 is H and/or alkyl chains having from 1 to 30 carbon atoms; and a2) up to 30% by weight of olefinically unsaturated monomers containing functional groups. The Patent Office further asserts that among monomers having 1-30 carbon atoms, Husemann names behenyl acrylate, and also names along with behenyl acrylate those same monomers, as named by Everaerts et al. '425, thus recognizing their equivalency for the purpose of being monomers for heat activatable adhesive compositions. In the instant case, the Patent Office argues that substitution of equivalents requires no express motivation, as long as the prior art recognizes equivalency, and it would have been obvious to those skilled in the art to employ the behenyl acrylate of Husemann as one of the monomers of suggested genus of Everaerts et al. '425 with the reasonable expectation of success.

Without agreeing to the Patent Office's characterization of either Everaerts et al. '425 or Husemann et al., Applicants submit that even assuming *arguendo* that behenyl acrylate was an art recognized equivalent, one would not be motivated by the combination of Everaerts et al. '425 in view of Husemann et al. to make a composition that is non-tacky for at least the reasons given in response to the rejection of claims 1-5, 7-19, 21-30 over Everaerts et al '425, above.

In summary, the rejection of claims, 7 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Everaerts et al. '425 in view of Husemann et al. has been overcome and should be withdrawn.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested.

Respectfully submitted,

June 29, 2005
Date

By: 
Bradford B. Wright, Reg. No.: 34,459
Telephone No.: (651) 736-4172

Office of Intellectual Property Counsel
3M Innovative Properties Company
Facsimile No.: 651-736-3833